

Title (en)

Optical temperature sensor utilizing birefringent crystals.

Title (de)

Optischer Temperaturfühler mit doppelbrechenden Kristallen.

Title (fr)

Capteur de température optique utilisant des cristaux biréfringents.

Publication

EP 0014849 A1 19800903 (EN)

Application

EP 80100315 A 19800122

Priority

US 561879 A 19790122

Abstract (en)

[origin: US4215576A] A temperature sensor comprising an optical transducer member having an array of birefringent crystals. The length and, accordingly, the sensitivity to temperature change of successive birefringent crystals varies according to a particular relationship. The transducer is interconnected with a fiber optic transmission and detecting system. Respective optical output signals that are transmitted from the birefringent crystals via the fiber optic transmission system are detected and decoded so as to correspond to digits of a numbering system, whereby an accurate digital representation of temperature can ultimately be provided.

IPC 1-7

G01K 11/12

IPC 8 full level

G01J 5/08 (2006.01); **G01J 5/58** (2006.01); **G01K 11/12** (2006.01)

CPC (source: EP US)

G01K 11/12 (2013.01 - EP US)

Citation (search report)

- US 3556662 A 19710119 - LEVENSTEIN HAROLD, et al
- US 4111050 A 19780905 - WADDOUPS RAY O
- GB 1544483 A 19790419 - STANDARD TELEPHONES CABLES LTD
- US 3672221 A 19720627 - WEIL RAOUL B
- CONTROL ENGINEERING, Vol. 26, No. 2, February 1979 New York US K.A. JAMES et al. "Fiber optics: the way to true digital sensors?", pages 30-33. * Pages 30-31, paragraph: "Bire-fringent digital temperature sensor" *

Cited by

WO9631763A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

EP 0014849 A1 19800903; CA 1131041 A 19820907; JP S5599034 A 19800728; US 4215576 A 19800805

DOCDB simple family (application)

EP 80100315 A 19800122; CA 344086 A 19800121; JP 520380 A 19800118; US 561879 A 19790122